McCoy, Erin

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Wednesday, January 06, 2016 12:01 PM
Hylton Jackson (Hylton.Jackson@dnr.iowa.gov)
Subject: FW: Answers to Vogel's Question

Hylton, did you send these to Vogel? I didn't receive a copy, so I wanted to make sure. Thanks!

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From: McCoy, Erin
Sent: Friday, December 04, 2015 2:22 PM
To: Hylton Jackson (Hylton.Jackson@dnr.iowa.gov) <Hylton.Jackson@dnr.iowa.gov>
Subject: Answers to Vogel's Question

Hylton, I looked into the creek evaluation in the Five-Year Review based on our conversation. It looks like the interaction between groundwater and surface water is what needs to be investigated, not necessarily the contamination. The original investigation did not include the depth of the creek or the elevations of the surface water, so the interconnectivity could not be evaluated. I revised the answer below to hopefully better explain that. I also revised the answer to the other question based on your comments. Since Vogel asked the question at the meeting, I feel that it should be answered, but I shortened it to hopefully be less confusing. Please let me know if you have any questions and include me on the e-mail when you send it to Vogel so I can include it in our records. Thanks!

Question #1 – Is groundwater migration still occurring?
EPA reviewed historic plume maps using the fall sampling events. The maps show an overall increase in concentrations in downgradient wells, indicating that the plume has migrated downgradient and is no longer confined to the site boundary. Examples of downgradient wells with increases include GMW-7R, GMW-21, GMW-30 and GMW-31.

Question #2 – What would it take to delist the site from the NPL?
Requirements for delisting a site from the NPL are outlined under 40 CFR 300.425 (e). In general, a site can be deleted from the NPL when no further response is appropriate. However, since contaminated groundwater is migrating off site and the site has not been returned to unrestricted use, the site does not meet the requirements to be deletion from the NPL.

Question #3 – Would Five-Year Reviews continue if the site was returned to unrestricted use?
They can, however, doing so is rare.

Question #4 – Can the PRP buy the property downgradient, extend the boundary of the site to include the downgradient property, place an environmental covenant on both properties, modify the ROD and Consent Order as a form of remediation?
No. Because this is an NPL site, it is regulated by CERCLA even though IDNR is the lead agency. The purpose of the NCP is to return site to unrestricted use, when practicable as stated in 40 CFR 300.430 (a). Based on this, EPA will cannot agree to extend the site boundary to include the downgradient property in lieu of an active remediation.

It should be noted that even though institutional controls on the downgradient property cannot be used in lieu of remediation, EPA agrees with IDNR that acquiring the downgradient property would be very useful since the current owner does not want any additional wells installed. The additional wells would help monitor the extent of the plume, determine future plume stability and access may be necessary for any future remedial action.

Question #5 – Geotek feels that adequate investigation as performed on the creek; however, the last Five-Year Review says that additional investigation needs to be performed. Why?

While IDNR discontinued surface water sampling in 2012, Section 6.4, page 15 of the most recent Five-Year review outlines the lack of information associated with the creek investigation. In 2011, cadmium, chromium, and lead exceeded the Iowa Ambient Water Quality Criteria (WQC) in the January sample collected on site, although there were no detections in the February sample. Mercury exceeded the Iowa WQC in the February 2011 samples from all three locations. The main question is not if contamination is present, but how the metal detected it got to the creek bed. The 2012 Groundwater Report indicates that the contamination was likely associated with background; however, because the depth of the creek and elevation of the water in the creek was not included, migration from groundwater into the creek could not be ruled out. Therefore, the interaction between the groundwater and creek have not been adequately investigated and the metals concentrations could be the result of groundwater discharging to the creek. This will need to be investigated; however, treatment of the migrating groundwater plume downgradient of the site is a priority that should be addressed first. Please disregard discussions at the meeting involving an ecological risk assessment at this time.

One or more site metals COCs have been detected at all three sample locations. Based on these results, metals from the Vogel site may be discharging into the creek. Although treated water from the remediation system is no longer being discharged into the creek, groundwater may be discharging into the creek. However, groundwater elevations and creek bottom elevations were not available during the review to evaluate this possibility. Therefore, further investigation to determine if the creek is being impacted by site contaminants is required. This includes an evaluation of the groundwater/surface water interaction, and further surface water sampling. In addition, since metals may oxidize and precipitate once groundwater enters the creek, creek sediments should be sampled and evaluated.

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